

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An imaging device with white balance adjustment, comprising:

image capture circuitry configured to produce captured image signals under identical illumination conditions for each of a standard calibration target to provide a first reference metric under the identical illumination conditions and for a nonstandard calibration target to produce a second reface metric under the identical illumination conditions,

means for capturing a second group of captured image signals from the nonstandard calibration target under changed illuminator conditions that differ from the identical illumination conditions to produce a third reference metric, and;

means for adjusting white balance in the second group of captured image signals by relating the third reference metric to the second reference metric; and
means for adapting the means for adjusting white balance by calibrating a non-standard target image to a standard target image;

2. (Original) The imaging device of claim 1, wherein the image capture circuitry includes a detector selected from the group consisting of a CCD detector array and a CMOS detector array.

3. (Original) The imaging device of claim 2, wherein the means for adjusting white balance include signal processing circuitry capable of changing variable gain coefficients enabled on the charge coupled device array.

4. (Currently Amended) The imaging device of claim 3, wherein the means for adapting the means for adjusting comprises an algorithm for relating a field image of a non-standard target to a primary image of a standard calibration target through use of the second reference metric.

5. (Original) The imaging device of claim 4, wherein the algorithm is operable for:

determining at least one variable gain coefficient for the field image,
determining at least one variable gain coefficient for the primary image,
relating the variable gain coefficient for the field image to the variable gain
coefficient for the primary image to produce an adjusted variable gain
coefficient, and

supplying the adjusted variable gain coefficient to the means for adjusting white
balance.

6. (Cancelled)

7. (Currently Amended) The imaging device of claim 1 6, wherein the non-standard calibration target is a human hand selected from the group consisting of a palm, a wallet, and a camera lens cover.

8. (Original) A method for adjusting white balance in an imaging device, the method comprising the steps of: capturing image signals from a field image of a non-standard calibration target and a primary image of a standard calibration target to produce a captured field image and a captured primary image; relating the captured field image to the captured primary image to provide calibration for adjustment of white balance; and adjusting white balance in the captured field image by applying the calibration.

9. (Original) The method of claim 8, wherein the step of adjusting white balance comprises enabling an adjusted variable gain coefficient on a variable gain amplifier.

10. (Original) The method of claim 9, wherein the step of enabling an adjusted variable gain coefficient comprises calculating a relationship between a variable gain coefficient for the field image and a variable gain coefficient for the primary image.

11. (Original) The method of claim 10, wherein the step of calculating includes; determining at least one variable gain coefficient for the field image, determining at least one variable gain coefficient for the primary image, relating the variable gain coefficient for the field image to the variable gain coefficient for the primary image to produce the adjusted variable gain coefficient, and supplying the adjusted variable gain coefficient to signal processing circuitry for use in normal photography.

12. (Original) The method of claim 8, wherein the step of capturing image signals includes capturing the field image from the non-standard calibration target selected from the group consisting of a palm, a wallet, and a camera lens cover.

13. (Currently Amended) An imaging device with white balance adjustment, comprising:

image capture circuitry configured to produce captured image signals;
a stored representation of a primary image of a standard calibration target useful for calibrating white balance adjustment;
a stored representation of a secondary image of a non-standard calibration target useful for calibrating white balance adjustment;
field capture image data of the nonstandard calibration target, and
white balance processing circuitry that adjusts white balance by relating the stored representation of at least one of the primary image to the stored representation of the secondary image to the field capture image data.

14. (Original) The imaging device of claim 13, wherein the image capture circuitry includes a detector selected from the group consisting of a CCD detector array and a CMOS detector array.

15. (Original) The imaging device of claim 14, wherein the white balance processing circuitry includes signal processing circuitry capable of changing variable gain coefficients enabled on the CCD array.

16. (Currently Amended) The imaging device of claim 13, wherein the white balance processing circuitry is operable for determining at least one variable gain coefficient for a field image, determining at least one variable gain coefficient for the primary image, relating the variable gain coefficient for the field image to the variable gain coefficient for the primary image to produce an adjusted variable gain coefficient, and supplying the adjusted variable gain coefficient to the means for adjusting white balance.

17. (Currently Amended) The imaging device of claim 13, wherein the white balance processing circuitry implements an empirical algorithm relating the stored representation of the primary image to the stored representation of the secondary image.